

## REMARKS

### I. CLAIM CHANGES

Independent claims 1, 15 and 16 have been amended to better point out and distinguish the claimed invention from the prior art. These claims have been limited to aerosol foam products comprising a composition that produces foam with "strand drawing properties". Claims 1, 15 and 16 include the definition of "strand drawing properties" from page 5 of the applicants' specification. In addition dependent claim 6, which claimed embodiments that have strand drawing properties, has been canceled.

Strand drawing properties are defined in more or less quantitative terms on page 5 of applicants' specification, lines 6 to 10. Foam has strand drawing properties if a strand or web of foam with a diameter of about 2 mm, preferably less than 1 mm, is formed between the thumb and the finger when foam is held or taken between the thumb and finger and then the thumb and finger are moved apart from each other.

One cannot conclude that any foam that is formed will have these strand drawing properties, because some foams will break up almost immediately when formed and some foams are not sufficiently sticky. These latter foams do not have sufficient internal cohesiveness and would fall apart before forming the

strand or web as described above. These latter foams do not have the strand drawing properties.

The strand drawing properties of foam are not equivalent to the foam foaming property of a composition. Since the term "strand drawing or forming properties" might be confused with foam forming properties, the term "forming" has been deleted from this term in the claims, the abstract and the specification.

Sufficient stickiness is a prerequisite for the strand drawing properties as claimed in claims 1, 15 and 16.

Stickiness alone is not always desired in cosmetic compositions that are applied to the hair if it leads to undesirable visible residues and unpleasant feel. However strand drawing properties are desirable when they lead to improved wetting of the hair and thus better action of the composition on the hair (page 5 of applicants' specification). Nevertheless it is perhaps somewhat surprising that foam with desirable strand drawing properties can be produced, which also provides good feel, luster and styling of the treated hair, as demonstrated by the examples on page 26 and following of the applicants' specification.

## II. ANTICIPATION REJECTIONS

### A. Nambu

Claim 16 stands rejected as anticipated under 35 U.S.C. 102 (b) by Nambu (US '844).

Nambu does not disclose any foamable compositions that produce aerosol foam with the strand drawing properties as claimed in amended claims 1, 15 and claim 16 and described in applicants' specification on page 5.

Nambu does mention that foam stickiness is a property to be considered in designing foamable compositions in column 2, line 44. Nambu is especially concerned with providing foam compositions for hair treatment that do not have flaking tendency, i.e. do not break up on the hair and leave a visible residue (column 3, line 26 and column 12, lines 10 to 30). The compositions of Nambu only leave a slight visible residue on the hair. However there is no teaching in Nambu that foams formed from his compositions are sticky or have strand drawing properties.

It is well established that each and every limitation of a claimed invention must be disclosed in a single prior art reference in order to be able to reject the claimed invention under 35 U.S.C. 102 (b) based on the disclosures in the single prior art reference. See M.P.E.P. 2131 and also the opinion in *In re Bond*, 15 U.S.P.Q. 2nd 1566 (Fed. Cir. 1990).

Nambu does not teach that his foam has strand drawing properties or the particular combination of polymers according to claim 1 that leads to the strand drawing properties.

For the foregoing reasons withdrawal of the rejection of claim 16 under 35 U.S.C. 102 (b) based on Nambu (US '844) is respectfully requested.

In addition, new dependent claim 18 has been filed, which includes the composition limitations of claim 1 and depends on claim 16.

For the foregoing reasons new dependent claim 18 should not be rejected under 35 U.S.C. 102 (b) as anticipated by Nambu (US '844).

### **B. Grollier**

Claim 16 stands rejected as anticipated under 35 U.S.C. 102 (b) by Grollier, et al (US '273).

US '273 do not disclose any foamable compositions that can produce aerosol foam with the strand drawing properties as claimed in claim 16 and described in applicants' specification.

US '273 discloses a rapidly breaking up and disappearing foam, which deposits a composition on the hair that can be left on without rinsing off without impairing the properties of the hair (obviously it does not leave a residue and *would not leave the hair with a sticky feel because a sticky feel is considered unpleasant*), according to column 1, lines 40 to 49, of US '273. Also note the last 10 lines of claim 1 and the other independent claims of US '273.

Thus the foam of US '273 would not have the strand drawing properties as claimed in amended claims 1, 15 and 16 because it would not have sufficient stickiness and because it breaks up too quickly.

Furthermore US '273 do not teach that their foam has strand drawing properties or the particular combination of polymers according to claim 1 that leads to the strand drawing properties.

For the foregoing reasons withdrawal of the rejection of claim 16 under 35 U.S.C. 102 (b) based on Grollier, et al, (US '273) is respectfully requested.

In addition, new dependent claim 18 has been filed, which includes the composition limitations of claim 1 and depends on claim 16.

For the foregoing reasons new dependent claim 18 should not be rejected under 35 U.S.C. 102 (b) as anticipated based on Grollier (US '273).

### III. OBVIOUSNESS REJECTION

Claims 1 to 16 were rejected under 35 U.S.C. 103 (a) over Schehlmann, et al, in view of Bolich Jr, et al.

Schehlmann, et al, teaches non-aerosol foam products containing a combination of specific anionic polymers and specific cationic polymers. Comparative example 11 is an aerosol foam product containing a combination of ethylacrylate/methacrylic acid copolymer (Luvimer MAE 30 D; which is the second polymer of current claim 1) and polyquaternium-46.

Schehlmann, et al, do not disclose or suggest aerosol foam compositions containing dialkyldiallyl ammonium chloride / acrylamide copolymer (e.g. MERQUAT @ 550 of applicants' example 1), as claimed in amended claims 1 and 15.

A unique property of applicants' claimed composition of amended claims 1 and 15 and claim 16 is the strand drawing property, now claimed in a quantitative manner in these claims. If the foam is touched by two fingers or two hands and the fingers or hands are drawn apart, then one or more strands of foam material will form between the fingers or hand surfaces. A single strand forms from a single touch point and a web-like structure made up of a multitude of strands will form from multiple touch

points. These strands or webs can be applied to hair resulting in superior application properties because e.g. wetting is improved.

One prerequisite for this unique strand forming property is a sufficient amount of stickiness as mentioned above.

None of the prior art compositions has strand forming properties due to lack of sufficient stickiness. Schehlman, et al, measured stickiness of several compositions of their invention and a comparative composition according to their semi-quantitative method described in column 12, lines 25 to 40. Their results appear in table 2 in column 11 of this U.S. Patent. Example 9 comprises only the anionic polymer MAA/EA copolymer (which is the second polymer of current claim 1) and is the most sticky composition of Schehlman, et al, with a stickiness number of 2 on a scale of 0 to 5). This stickiness is not enough to form strands, since only when the stickiness number is greater than 5 will the polymer film be torn away from the test plate.

Furthermore when the cationic polymer polyquaternium-46 is added to the composition of example 9, the stickiness even decreases further to 1 (no stickiness). Thus, Schehlmann, et al, teaches that when combining the anionic MAA/EA copolymer with a cationic polymer, it is even less likely to produce foam with strand forming properties.

The teaching in columns 11 and 12 regarding stickiness in Schehlmann, et al, is clearly teaching away from the present invention as claimed in applicants' amended claims 1, 15 and 16. It is well established that a reference that contains teaching away from the claimed invention should not be used alone or combined with

other references to reject a claimed invention under 35 U.S.C. 103 (a). See for example M.P.E.P. 2145. X. Also the Federal Circuit Court of Appeals has said:

"In determining whether such a suggestion [of obviousness] can fairly be gleaned from the prior art...It is indeed pertinent that these references teach against the present invention. Evidence that supports, rather than negates, patentability must be fairly considered." *In re Dow Chemical Co.*, 837 F.2d 469,473, 5 U.S.P.Q.2d 1529, 1532 (Fed. Cir. 1988)

Bolich, et al, also clearly teach away from the invention as claimed in amended claims 1, 15 and 16.

Bolich, et al, specifically state that it is an object of their invention to avoid sticky compositions and to provide compositions without stickiness (see column 1, lines 65-67 and column 2, lines 46-48). This necessarily implies providing foam compositions that do not have the strand drawing properties because stickiness is a prerequisite for the strand drawing properties.

Bolich, et al, do teach that polyquaternium-7 (which is the first polymer of current amended claim 1) may be used in his non-sticky compositions but that polyquaternium-7 is equivalent to other cationic polymers, such as polyquaternium-46 (see column 21, lines 42 and 47).

A person skilled in the cosmetic arts would not expect that a strand-forming foam composition (which implicitly must be sticky) would be created by modifying the non-sticky compositions of Schehlmann, et al. There is no suggestion either in Schehlmann, et al, or Bolich, et al, regarding the modification that is necessary to convert their non-sticky compositions into strand-forming or sticky compositions. The skilled person would certainly not expect any success in this regard due to adding the

polymer compounds disclosed by Bolich, et al, because Bolich, et al, also teaches non-sticky compositions.

Schehlmann, et al, teach that adding polyquaternium-46 to a composition containing MAA/EA copolymer (the second polymer of applicants' claim 1) changes the stickiness in the wrong direction because stickiness decreases (examples 8, 9 and 11). Bolich, et al, teaches that polyquaternium-7 and polyquaternium-46 are equivalent (page 6, about lines 11 to 15, of the Office Action). Thus these two references suggest that adding the first polymer of amended claim 1 to a composition containing the second polymer of amended claim 1 would decrease stickiness or lead to a composition with almost no stickiness. The combined teach of these references, as well as the individual references, would lead one skilled in the art away from the invention as claimed in amended claims 1, 15 and 16.

Thus one skilled in the art would not expect that foam with the strand drawing properties could be produced from the compositions as described by Schehlmann, et al, and/or Bolich, et al.

For the foregoing reasons and because of the changes in amended claims 1 and 16, withdrawal of the rejection of claims 1 to 16 as obvious under 35 U.S.C. 103 (a) over Schehlmann, in view of Bolich, is respectfully requested.



#### IV. DOUBLE PATENTING REJECTIONS

##### A. Based on a Combination with Bolich, et al

Claim 16 stands rejected on the grounds of obviousness-type double patenting (ODP) over

claim 1 and 9 of US 6,156,298, in view of Bolich, et al (US '115);

claims 1 and 5 of US 6,475,475, in view of Bolich, et al (US '115); and

claims 1 and 7 of US 6,387,477, in view of Bolich, et al (US '115).

Amended claim 16 does not merely state that the foam is formed or that the composition has foam forming properties. The strand drawing properties are defined in a quantitative manner in amended claim 16.

Bolich, et al, also clearly teach away from the invention as claimed in amended claims 1, 15 and 16. Bolich, et al, specifically state that it is an object of their invention to avoid sticky foam and to provide foam without stickiness (see column 1, lines 65-67 and column 2, lines 46-48). This necessarily implies providing foam compositions that do not have the strand drawing properties because stickiness is a prerequisite for the strand drawing properties.

A reference that contains teaching of the opposite from the claimed invention should not be combined with any other prior art reference to reject the claimed invention for obviousness-type double patenting.

**B. Not Based on a Combination with Bolich, et al**

Claim 16 stands rejected on the grounds of obviousness-type double patenting (ODP) over

claims 1 to 11 of US 6,589,510 and claims 1 to 9 of US 6,328,950;

claims 1 to 14 of co-pending application Ser. No.: 10/435,953;

claims 1 and 7 of US 4,976,952; and

claims 1 and 13 of US Patent 4,931,271.

Amended claim 16 does not merely state that the foam is formed or that the composition has foam forming properties. The strand drawing properties are defined in a quantitative manner in amended claim 16. None of the above prior art reference disclose or suggest any foam compositions that produce aerosol foam with the strand drawing properties as claimed in amended claims 1, 15 and claim 16 and described in applicants' specification on page 5.

Specifically, US 4,976,952 does disclose compositions that can form a foam for cosmetic purposes and the examples do describe measurements of foam heights to determine foam stability and some general foam properties, but this reference does not disclose determination of either foam stickiness or strand drawing properties or mention these properties in any other context.

US 4,931,271 disclose compositions for treating skin and hair containing chitosan derivatives. Some embodiments contain hair dye compounds. Some embodiments can be in the form of aerosol foam products. However this

reference does not disclose any foam properties of the foam itself.

US 6,589,510 and US 6,328,950 both describe special foam compositions for treating hair. The foam of US '510 contains foam-breaking components for fast foam breaking (columns 4 and 5) and is thus designed to break up fast. Neither of these references teaches or suggests that the foam formed is sticky or has the strand drawing properties. However in view of the fast breaking property of the foam of US '510 it is unlikely that it would last long enough to determine whether it had strand drawing properties or that it would have such strand drawing properties.

For the foregoing reasons and because of the changes in amended claims 1, 15 and 16, withdrawal of the rejections of claim 16 for obviousness-type double patenting (ODP) based on

claims 1 to 11 of US 6,589,510 and claims 1 to 9 of US 6,328,950;  
claims 1 to 14 of co-pending application Ser.No.: 10/435,953;  
claim 1 and 9 of US 6,156,298, in view of Bolich, et al (US '115);  
claims 1 and 5 of US 6,475,475, in view of Bolich, et al (US '115);  
claims 1 and 7 of US 6,387,477, in view of Bolich, et al (US '115);  
claims 1 and 7 of US 4,976,952; and  
claims 1 and 13 of US Patent 4,931,271;  
is respectfully requested.

## V. INFORMATION DISCLOSURE STATEMENT

It is noted that DE 32 17 059 A1, which was listed on the information disclosure statement filed with the original application papers and which was cited in the second paragraph on page 3 of the applicants' specification, was crossed off indicating that it was not considered. Also the information disclosure statement indicated that an English translation was not provided.

However an English translation of DE 32 17 059 A1 is available, because this reference is in the same patent family as US 4,761,273 A, Grollier, et al, which was used to reject claim 16 as anticipated. Applicants have informed us that US 4,761,273 A is in the same patent family as DE 32 17 059 A1 and thus is essentially an English translation of DE 32 17 059 A1. Furthermore the fact that the DE reference is in the same patent family can be checked by searching the internet for the DE reference at the European Patent Office web site (Esp@cenet web site).

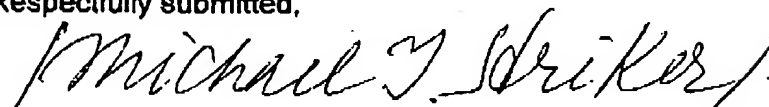
In view of the availability of an English language equivalent for the DE reference, please return of an initialed copy of the Information Disclosure Statement filed with the original application papers and listing DE 32 17 059 A1, which indicates that the DE reference has been considered.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put

this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549 4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,



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